

BEST AVAILABLE COPY**In the claims:**

For the Examiner's convenience, all pending claims are presented below with changes shown in accordance with the mandatory amendment format.

1.-8. (Cancelled)

9. (Previously Presented) A communications device comprising:

a transmitter coupled to an antenna array, the antenna array comprising a plurality of antenna elements, the transmitter operable to transmit a calibration burst by:

transmitting a first waveform from a first antenna element of the plurality of antenna elements, the first waveform comprising a combined signal that is a combination of two or more signals; and

transmitting a second waveform from two or more antenna elements of the plurality of antenna elements, the second waveform comprising the two or more signals each transmitted from an antenna element of the two or more antenna elements corresponding to each signal.

10. (Previously Presented) The communications device of claim 9, wherein the first antenna element is one of the two or more antenna elements.

11. (Previously Presented) The communications device of claim 9, wherein the second waveform comprises a sum of the two or more signals.

12. (Previously Presented) The communications device of claim 9, wherein the communications device comprises a base station of a radio communications network.

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13. (Previously Presented) The communications device of claim 12, wherein the calibration burst is transmitted to a user terminal of the radio communications network, the user terminal being operable to use the calibration burst to assist in calibrating the base station.

14. (Cancelled)

15. (Previously Presented) The communications device of claim 9, wherein the first antenna element comprises a reference element with respect to which the other antenna elements are calibrated.

16. (Previously Presented) The communications device of claim 9, wherein the communications device comprises a subscriber unit.

17. (Previously Presented) A method comprising:

receiving a first waveform from a first antenna element of a plurality of antenna elements, the first waveform comprising a combined signal that is a combination of two or more signals; and

receiving a second waveform from two or more antenna elements of the plurality of antenna elements, the second waveform comprising the two or more signals each transmitted from an antenna element of the two or more antenna elements corresponding to each signal.

18. (Previously Presented) The method of claim 17, wherein the first antenna element is one of the two or more antenna elements.

19. (Previously Presented) The method of claim 17, wherein the second waveform comprises a sum of the two or more signals.

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20. (Previously Presented) The method of claim 17, further comprising utilizing, by a user terminal of a radio communications network, the first and second waveforms to assist in calibrating a base station of the radio communications network.

21. (Previously Presented) The method of claim 17, wherein the first antenna element comprises a reference element with respect to which the other antenna elements are calibrated.

22. (Previously Presented) A method, comprising:

transmitting from a subscriber unit a first waveform from a first antenna element of a plurality of antenna elements coupled to the subscriber unit, the first waveform comprising a combined signal that is a combination of two or more signals; and

transmitting from the subscriber unit a second waveform from two or more antenna elements of the plurality of antenna elements, the second waveform comprising the two or more signals each transmitted from an antenna element of the two or more antenna elements corresponding to each signal;

wherein the subscriber unit is coupled to an antenna array, the antenna array comprising the plurality of antenna elements.

23. (Previously Presented) The method of claim 22, wherein the subscriber unit is a radio transceiver remote to an array-equipped transceiver and transmits the first and second waveforms to the array-equipped transceiver.

24. (Previously Presented) The method of claim 22, wherein the first antenna element is one of the two or more antenna elements.

25. (Previously Presented) The method of claim 22, wherein the second waveform comprises a sum of the two or more signals.
26. (Previously Presented) The method of claim 22, further comprising utilizing the first and second waveforms by a receiver of the first and second waveforms to assist in calibrating the receiver.
27. (Previously Presented) The method of claim 22, wherein the first antenna element comprises a reference element with respect to which the other antenna elements are calibrated.
28. (New) A communications device comprising:
a transmitter coupled to an antenna array, the antenna array comprising a plurality of antenna elements, the transmitter operable to:
transmit a first data signal and a first calibration signal from a first antenna element of the plurality of antenna elements; and
transmit a second data signal and a second calibration signal from at least one other antenna element in the plurality of elements.
29. (New) The communications device of claim 28, wherein the first and second data signals are identical, and the first and second calibration signals are identical.
30. (New) The communications device of claim 28, wherein the first and second data signals are different, and the first and second calibration signals are identical.
31. (New) The communications device of claim 28, wherein the first and second data signals are identical, and the first and second calibration signals are different.

32. (New) The communications device of claim 28, wherein the first and second data signals are different, and the first and second calibration signals are different.
33. (New) The communications device of claim 28, wherein the transmitter transmits the first data signal and the first calibration signal in a time period that overlaps a time period for transmitting the second data signal and the second calibration signal.
34. (New) The communications device of claim 33, wherein the first and second data signals are identical, and the first and second calibration signals are identical.
35. (New) The communications device of claim 33, wherein the first and second data signals are different, and the first and second calibration signals are identical.
36. (New) The communications device of claim 33, wherein the first and second data signals are identical, and the first and second calibration signals are different.
37. (New) The communications device of claim 33, wherein the first and second data signals are different, and the first and second calibration signals are different.
38. (New) The communications device of claim 28, wherein the transmitter transmits the first data signal and the first calibration signal at non-overlapping time periods with respect to transmitting the second data signal and the second calibration signal.
39. (New) The communications device of claim 38, wherein the first and second data signals are identical, and the first and second calibration signals are identical.
40. (New) The communications device of claim 38, wherein the first and second data signals are different, and the first and second calibration signals are identical.

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41. (New) The communications device of claim 38, wherein the first and second data signals are identical, and the first and second calibration signals are different.
42. (New) The communications device of claim 38, wherein the first and second data signals are different, and the first and second calibration signals are different.
43. (New) The communications device of claim 28, wherein the communications device is a subscriber device.
44. (New) The communications device of claim 28, wherein the communications device is a base station.
45. (New) The communications device of claim 28, further comprising a receiver operable to receive information processed at a remote transceiver wherein the received information is derived from the transmitted first and second calibration signals.
46. (New) The communications device of claim 28, wherein the first and second data signals are transmitted on at least one traffic channel and the first and second calibration signals are transmitted on at least one of: at least one traffic channel and at least one calibration channel.
47. (New) A method comprising:
transmitting a first data signal and a first calibration signal from an antenna element;
and
transmitting a second data signal and a second calibration signal from another antenna element.

48. (New) The method of claim 47, wherein the first and second data signals are identical, and the first and second calibration signals are identical.
49. (New) The method of claim 47, wherein the first and second data signals are different, and the first and second calibration signals are identical.
50. (New) The method of claim 47, wherein the first and second data signals are identical, and the first and second calibration signals are different.
51. (New) The method of claim 47, wherein the first and second data signals are different, and the first and second calibration signals are different.
52. (New) The method of claim 47, further comprising transmitting the first data signal and the first calibration signal in a time period that overlaps a time period for transmitting the second data signal and the second calibration signal.
53. (New) The method of claim 47, further comprising transmitting the first data signal and the first calibration signal at non-overlapping time periods with respect to transmitting the second data signal and the second calibration signal.
54. (New) The method of claim 47, further comprising: receiving the transmitted first and second calibration signals at a remote device and in response processing the calibration signals.
55. (New) The method of claim 54, further comprising transmitting the processed calibration signals to another device.

56. (New) The method of claim 54, further comprising using the results of processing the first and second calibration signals to enable the reception of the first and second data signals.

57. (New) The communications device of claim 47, wherein the first and second data signals are transmitted on at least one traffic channel and the first and second calibration signals are transmitted on at least one of: at least one traffic channel and at least one calibration channel.

58. (New) A communications device comprising:

a receiver operable to:

receive a first data signal and a first calibration signal, the first data signal and the first calibration signal being transmitted from a first antenna element; and

receive a second data signal and a second calibration signal, the data signal and the second calibration signal being transmitted from at least one other antenna element.

59. (New) The communications device of claim 58, wherein the first and second data signals are identical, and the first and second calibration signals are identical.

60. (New) The communications device of claim 58, wherein the first and second data signals are different, and the first and second calibration signals are identical.

61. (New) The communications device of claim 58, wherein the first and second data signals are identical, and the first and second calibration signals are different.

62. (New) The communications device of claim 58, wherein the first and second data signals are different, and the first and second calibration signals are different.

63. (New) The communications device of claim 58, wherein the receiver receives the first data signal and the first calibration signal during a first time period, and receives the second data signal and the second calibration signal in a second time period, said first and second time periods overlapping.

64. (New) The communications device of claim 58, wherein the receiver receives the first data signal and the first calibration signal at non-overlapping time periods with respect to receiving the second data signal and the second calibration signal.

65. (New) The communications device of claim 58, further operable to process the calibration signals.

66. (New) The communications device of claim 65, operable to use the results of processing the first and second calibration signals to enable the reception of the first and second data signals.

67. (New) The communications device of claim 65, operable to transmit the processed calibration signals to another device.

68. (New) The communications device of claim 58, further comprising: an antenna array coupled to the receiver and operable to receive the first data signal, the first calibration signal, the second data signal, and the second calibration signal.

69. (New) The communications device of claim 58, wherein the first and second data signals are transmitted on at least one traffic channel and the first and second calibration signals are transmitted on at least one of: at least one traffic channel and at least one calibration channel.

70. (New) A method comprising:

receiving a burst on a traffic channel of an air-interface protocol; and
extracting from the received burst at least a calibration burst.

71. (New) The method of claim 70, further comprising calculating a spatial signature related measurement using the calibration burst.

72. (New) The method of claim 70, wherein the method is performed by a subscriber unit.

73. (New) The method of claim 70, wherein the method is performed by a base station.

74. (New) A method comprising:

inserting a calibration signal into a traffic signal; and
transmitting the traffic signal on a traffic channel of an air-interface protocol.

75. (New) The method of claim 74, wherein the method is performed by a subscriber unit or a base station.

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